

Attorney Docket No. P66014US1

Appln. No. 09/879,814

- said separation medium having the annular design is rotated essentially vertically about an axis which is defined in the direction of flow of the mixture through the separation medium having the annular design;
- an eluent is passed through the separation medium having the annular design; and
- fractions comprising the separated proteins exiting at the end of the separation medium having the annular design are collected.

50. The process according to claim 49, characterized in that said mixture contains at least two plasma proteins to be separated.

51. The process according to claim 49, wherein said separation medium having the annular design is used for ion-exchange, gel permeation, molecular size exclusion or affinity chromatography or chromatography based on hydrophobic interactions.

52. The process according to claim 49, wherein said plasma proteins are inter- $\alpha$ -trypsin inhibitor,  $\alpha_1$ -antitrypsin, antithrombin III, immune globulins, or vitamin K dependent blood clotting factors.

53. The process according to claim 52, wherein the immune globulins are IgG, human serum albumin or glycoproteins, optionally from a clotting cascade.

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54. The process according to claim 49, characterized in that said plasma proteins are selected from the group consisting of blood clotting factors VIII, IX, and thrombin.

55. The process according to claim 49, characterized in that the functions of mixing, of separating the plasma proteins and of the fractioning are performed continuously.

56. The process according to claim 49, characterized in that the separation medium is continuously regenerated and equilibrated, simultaneously with the separation of the plasma proteins.

57. The process according to claim 49, characterized in that, when a material for adsorption chromatography is used as the separation medium, at least two different eluents are simultaneously passed through said separation medium having the annular design.

58. The process according to claim 49, characterized in that at least two different separation media are employed in layers.

59. The process according to claim 49, characterized in that a polymeric block material is employed as said separation medium.